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UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF PUBLIC ROADS
DIVISION OF AGRICULTURAL ENGINEERING

S. H. McCrory, Chief

MONTHLY NEWS LETTER

WASHINGTON, D.C., JUNE 20, 1925.

THE RECORD OF ANOTHER YEAR'S ACCOMPLISHMENT OF THE DIVISION ENDS ON JUNE 30, ANOTHER YEAR'S WORK WILL SOON BEGIN. IT IS PROPER AT THIS TIME THAT EACH OF US CONSIDER WHAT HAS BEEN OUR CONTRIBUTION TO THE WELFARE OF AGRICULTURE IN THE UNITED STATES DURING THE PAST YEAR AND WHAT IT IS PROPOSED TO ACCOMPLISH DURING THE COMING YEAR; WHAT NEW FACTS HAVE WE DISCOVERED; WHAT USEFUL INFORMATION HAVE WE DISSEMINATED; WHAT HAVE WE DONE, IN SHORT, TO JUSTIFY THE EXPENDITURE OF PUBLIC FUNDS ON OUR WORK?

THE DIVISION IS A RESEARCH ORGANIZATION. OUR GREATEST SUCCESS WILL COME ONLY WHEN WE REALIZE THAT THE ULTIMATE OBJECT OF ALL RESEARCH IS PUBLICATION; THAT THE VALUE OF THE WORK IS, TO A LARGE EXTENT, LOST IF THE RESULTS ARE NOT MADE AVAILABLE TO THOSE WHO CAN USE THEM.

IT SHOULD, THEREFORE, BE OUR AIM TO CONCENTRATE ON ONE JOB, DECIDE WHAT IS NECESSARY TO BE DONE, DO IT, AND PREPARE THE REPORT ON THE RESULTS OBTAINED IN A CLEAR, CONCISE FASHION THAT CAN EASILY BE UNDERSTOOD BY THE READER TO WHOM IT IS ADDRESSED.

S. H. McCrory

AT THE REQUEST OF THE TROPICAL PLANT RESEARCH ASSOCIATION, MR. McCRORY LEFT WASHINGTON MAY 20 FOR HAVANA, CUBA, TO MAKE AN EXAMINATION OF DRAINAGE AND IRRIGATION CONDITIONS ON SEVERAL PLANTATIONS. MR. McCRORY REPORTS THAT HE FOUND IT MUCH EASIER TO "RAISE CANE" IN CUBA THAN IN THE UNITED STATES, AS EVIDENCED BY THE FACT THAT GOOD STANDS WERE OBSERVED WHERE METHODS WERE IN USE THAT IN THIS COUNTRY WOULD BE CALLED INFERIOR. ON HIS RETURN NORTH, MR. McCRORY SPENT A DAY OR TWO WITH A.O. KAY, GOING OVER HIS FLORIDA WORK.

THE FOLLOWING WILL ATTEND THE MEETING OF THE AMERICAN SOCIETY OF AGRICULTURAL ENGINEERS AT MADISON, WIS., JUNE 22-25; S.H. McCRORY, W.W. McLAUGHLIN, GEO. R. BOYD, R.D. MARSDEN, H.H. BARROWS, D. G. MILLER AND P.C. McGREW.

DRAINAGE

ON JUNE 6 F.E. STAEBNER LEFT WASHINGTON FOR THE PURPOSE OF INSPECTING THE WORK OF J.G. SUTTON ON SUGAR CANE IRRIGATION AND TO CONFER WITH PERSONS IN THE VICINITY OF NEW ORLEANS WHO ARE INTERESTED IN THE IRRIGATION OF THIS CROP.

R.D. MARSDEN IS IN THE MIDDLE WEST MAKING A STUDY OF THE OLD QUESTION "TILE DRAINS VERSUS OPEN DITCHES", ESPECIALLY THE RELATIVE CONSTRUCTION AND MAINTENANCE COSTS OF THE TWO TYPES. HIS INVESTIGATIONS OF TILE REFERS, OF COURSE, TO TILE OF LARGE SIZES.

L.A. JONES VISITED GEO. A. MITCHEL EARLY IN THE MONTH FOR THE PURPOSE OF GOING OVER THE NEW JERSEY PROJECTS BEING CARRIED ON BY MR. MITCHEL.

F.F. SHAFER IS IN WASHINGTON FOR A BRIEF TIME CONFERRING WITH MR. MCCRORY AND PREPARING A PROGRESS REPORT OF HIS INVESTIGATION OF DRAINAGE PUMPING PLANTS. HIS FAMILY WILL ACCOMPANY HIM ON HIS RETURN TO HEADQUARTERS AT QUINCY, ILL. HE REPORTS UNUSUALLY DRY WEATHER THROUGHOUT THE REGION IN WHICH DRAINAGE PUMPING PLANTS ARE LOCATED.

A.O. KAY IS RERUNNING THE MUCK SHRINKAGE PROFILES IN FLA., TO ASCERTAIN HOW MUCH SETTLEMENT HAS OCCURRED SINCE THE LAST REPORT WAS ISSUED.

THE UNIVERSITY OF IOWA, THROUGH PROFESSORS S.M. WOODWARD AND F.E. NAGLER, IS COOPERATING WITH THIS DIV. ON RUN-OFF STUDIES OF THE NORTH BRANCH OF RALSTON CREEK AT IOWA CITY. THE DRAINAGE AREA COMPRISES 3.03 SQUARE MILES, BEING $3\frac{1}{2}$ MILES LONG AND $7/8$ MILE WIDE. THE MEAN SLOPE OF THE WATERSHED IS VERY STEEP, BEING 516 FEET PER MILE. THE MAIN STREAM IS 4 MILES LONG AND HAS 140 FEET FALL. THE STATE UNIVERSITY HAS DETAILED A GRADUATE ENGINEER TO THE PROJECT AND D.L. YARNELL REPRESENTS THIS DIVISION. THE INVESTIGATION IS EXPECTED TO CONTINUE FOR SEVERAL YEARS.

MR. YARNELL IS CONTINUING COMPARATIVE TESTS OF CURRENT METERS BUT EXPECTS TO CONCLUDE THEM BY JULY 1.

P.T. SIMONS REPORTS LIGHT RAINFALL IN ARKANSAS. SOME INTERESTING AND VALUABLE DATA HAVE BEEN SECURED THE PAST MONTH RELATIVE TO THE TIME REQUIRED FOR WATER TO FLOW THROUGH THE CROOKED, NATURAL WATERCOURSES AFTER IT HAD BEEN COLLECTED AND DISCHARGED BY STRAIGHT, DREDGED CHANNELS.

MR. SIMONS HAS BEEN ELECTED A MEMBER OF THE McGEHEE BUSINESS MENS' CLUB AND HAS BEEN INVITED TO ADDRESS THE CLUB RELATIVE TO HIS INVESTIGATIONS.

IRRIGATION

W.W. McLAUGHLIN, ACTING ASSOC. CHIEF, VISITED THE FIELD STATION AT FT. COLLINS, COLO. AND LOGAN, UTAH, IN CONNECTION WITH THE COOPERATIVE WORK IN THOSE STATES AND FOR THE PURPOSE OF ARRANGING FOR FUTURE COOPERATION.

F.C. SCOBEE WENT TO DENVER DURING THE MONTH TO ARRANGE THE PRELIMINARY WORK ON THE NEW PROJECT PERTAINING TO THE FLOW OF WATER IN NEW PIPE LINES AND THE CALIBRATION OF MEASURING DEVICES FOR DIVIDING POOLED WATER RIGHTS ON THE SOUTH PLATTE RIVER.

J. C. MARR RETURNED TO HIS HEADQUARTERS AT BOISE, IDAHO, EARLY IN MAY AFTER HAVING VISITED THE BERKELEY OFFICE AND POINTS IN THE SOUTHWESTERN STATES.

L. T. JESSUP ATTENDED A CONFERENCE AT THE STATE EXPERIMENT STATION AT PROSSER, WASHINGTON, TO CONSIDER AN EXPERIMENT ON THE MANAGEMENT OF DRAINED ALKALI SOILS.

UNDER THE DIRECTION OF R. L. PARSHALL, CONSTRUCTION WORK IS IN PROGRESS AT THE BELLEVUE, COLORADO FIELD LABORATORY, DESIGNED TO INCREASE THE CAPACITY OF THE LABORATORY IN EXPERIMENTING WITH MEASURING DEVICES. WHEN THE PRESENT PLAN IS FULLY DEVELOPED THIS LABORATORY WILL PROVIDE FACILITIES TO MEASURE WATER UP TO ABOUT 200 SECOND-FOOT.

L. M. WINSOR REPORTS THAT A DEFINITE STEP FORWARD IN THE PROGRAM OF CONSOLIDATION OF COTTONWOOD CREEK AND GOOSEBERRY IRRIGATION COMPANIES IN SAN PETE COUNTY, UTAH, HAS BEEN TAKEN. A REPRESENTATIVE ATTENDANCE OF WATER USERS WAS SECURED FOR THE FIRST TIME ON MAY 2, WHICH RESULTED IN UNANIMOUS APPROVAL OF THE PROJECT. DETAILS OF THE PLAN OF CONSOLIDATION ARE NOW BEING WORKED OUT WHICH, IF SUCCESSFUL WILL RESULT IN SUFFICIENT WATER FOR ALL PARTIES CONCERNED THROUGHOUT THE ENTIRE SEASON.

AN INGENIOUS MANNER OF REMOVING GREASEWOOD ROOTS WHICH HAD ENTERED AND CHOKED A LARGE DRAIN TILE IN MILLARD COUNTY DRAINAGE DISTRICT No. 2, UTAH, WAS REPORTED BY R. A. HART. REMOVAL WAS ACCOMPLISHED BY MEANS OF THREE STEEL CABLES TO EACH OF WHICH A BRUSH MADE OF A MASS OF FENCE WIRE WAS ATTACHED AND JOINED INTO A CONTINUOUS LOOP WHICH PASSED THROUGH A SECTION OF THE TILE LINE AND RETURNED OVER THE SURFACE OF THE GROUND, BEING DRAWN BY MEANS OF A TEAM OF HORSES AND GUIDED INTO AND OUT OF THE TILE BY A SET OF PULLEYS ATTACHED TO A FRAMEWORK OF TIMBER. OPENINGS WERE FIRST MADE TO THE TILE LINE AT INTERVALS OF SEVERAL HUNDRED FEET, SECTIONS OF TILE WERE REMOVED AND A CORD FORCED THROUGH THE TILE LINE BY MEANS OF A STRING OF LATH.

MR. HART INSPECTED NEW HOPE DRAINAGE DISTRICT AT SANTA ANA, CAL., ON WHICH CONSTRUCTION WORK WITHIN THE ESTIMATED COST WAS COMPLETED IN APRIL. BENEFICIAL RESULTS ARE ALREADY APPARENT FROM THIS EFFECTIVE AND HIGHLY SATISFACTORY DRAINAGE SYSTEM.

A MEMORANDUM HAS BEEN PREPARED BY DR. SAMUEL FORTIER RELATING TO A PROPOSED STUDY OF THE IRRIGATION REQUIREMENTS OF THE ARABLE LANDS SUSCEPTIBLE OF IRRIGATION IN THE COLORADO RIVER BASIN. THIS PROJECT, IF AUTHORIZED, BIDS FAIR TO BE ONE OF THE MOST IMPORTANT UNDERTAKINGS OF THIS OFFICE FOR SOME TIME. SUCH A STUDY MUST BE MADE BEFORE THE FAR-REACHING COLORADO RIVER QUESTION CAN BE SETTLED.

DR. FORTIER ALSO PREPARED A MEMORANDUM ON DUTY OF WATER IN NORTHERN COLORADO AND APPROXIMATE VALUE OF RETURN WATER TO THE SOUTH PLATTE RIVER. THE VALUE OF THIS RETURN WATER IS ESTIMATED TO BE \$3000 PER SECOND-FOOT.

AN OUTLINE OF A PROPOSED BULLETIN ON THE IRRIGATION OF COTTON, PREPARED BY R. G. HEMPHILL, J. C. MARR AND D. W. BLOODGOOD, WAS TRANSMITTED TO WASHINGTON.

On 11 March 1944, the first of the two main groups of the 1st Army, the 1st Army, was ordered to move to the front line. The 1st Army was ordered to move to the front line. The 1st Army was ordered to move to the front line.

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AT THE REQUEST OF THE DIVISION OF PUBLICATIONS F.B.805 "DRAINAGE OF IRRIGATED LANDS" IS BEING REVISED PREPARATORY TO PUBLISHING A NEW EDITION.

RURAL ENGINEERING.

M.C.BETTS HAS RECENTLY RETURNED TO WASHINGTON FROM AN EXTENDED TRIP FOR THE PURPOSE OF SECURING FIRST-HAND INFORMATION FROM STATE AND OTHER INSTITUTIONS REGARDING THE DESIGN AND OPERATION OF APPLE AND POTATO STORAGE STRUCTURES. A NUMBER OF OTHER INSTITUTIONS IN NEW ENGLAND AND CANADA WILL BE VISITED BEFORE THE INVESTIGATION IS CONCLUDED.

GEO.M.WARREN IS SCOUTING IN NEARBY MARYLAND FOR SUITABLE SCENES AND PLACES FOR A PROPOSED FILM ON "FARM WATER SUPPLY".

AT THE REQUEST OF THE DIV. OF PUBLICATIONS C.D.KINSMAN OF THIS DIV. AND L.A.REYNOLDS ON OF THE BUREAU OF AGRICULTURAL ECONOMICS HAVE RECENTLY PREPARED A REVISION OF F.B.1045 ON "LAYING OUT FIELDS FOR TRACTOR PLOWING".

A DESIGN HAS BEEN MADE BY S.J.DENNIS AND DRAWINGS PREPARED, FOR A PORTABLE COOLING BOX TO BE USED IN CONDUCTING STUDIES OF LETTUCE.

THE PLANS FOR A LABORATORY AND A SUPERINTENDENT'S COTTAGE TO BE BUILT AT CANAL POINT, FLA. BY THE BUREAU OF PLANT INDUSTRY, WERE COMPLETED AND SPECIFICATIONS PREPARED.

A.M. DANIELS RESIGNED FROM THE SERVICE, EFFECTIVE JUNE 15. A.H. SENNER IS CONTINUING THE WORK OF TESTING DOMESTIC OIL BURNERS STARTED BY MR. DANIELS. W.R. HUMPHRIES IS ALSO ENGAGED ON THIS PROJECT.

W.G. HUKILL RECENTLY ACCOMPANIED A CAR OF STRAWBERRIES FROM SALISBURY, MARYLAND, TO BOSTON, IN A TEST TO DETERMINE WHETHER OR NOT IT WOULD BE POSSIBLE TO SHIP STRAWBERRIES IN MINIMUM CARLOAD LOTS.

MULTIGRAPHED MEMORANDA, CONSTITUTING AN INFORMATION SERIES, ARE PREPARED FROM TIME TO TIME FOR USE IN SUPPLEMENTING INFORMATION GIVEN IN LETTERS. FREQUENTLY THEY ARE THE FORERUNNERS OF BULLETINS. A FEW OF THE MORE RECENT OF THESE ARE LISTED BELOW:

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| 32. PLASTER AND PLASTERING. | 43. CONCRETE SIDEWALKS, FEEDING |
| 34. COMPARISON OF ROUND AND | FLOORS AND STEPS. |
| RECTANGULAR BARNs. | 44. ACETYLENE GAS. |
| 38. DOMESTIC REFRIGERATION. | 47. COLD STORAGE REFERENCES. |
| 41. ICELESS REFRIGERATOR. | 48. HISTORY OF THE PLOW. |
| 42. REFRIGERATION AND ICE | 49. LIME BURNING. |
| MAKING INSTALLATIONS. | 50. PISE DE TERRE. |

DISTRIBUTION OF SURPLUS WAR EXPLOSIVES.

WE ARE NOW ISSUING THE STATE AGREEMENTS FOR THE DISTRIBUTION OF PYROTOL FOR THE FISCAL YEAR. DURING THE FISCAL YEAR 1925 WE DISTRIBUTED FOR LANDCLEARING SOMEWHAT OVER 10,000,000 POUNDS OF THIS EXPLOSIVE.

GEO. R. BOYD WILL BE ENGAGED MOST OF THIS MONTH WITH DEPARTMENT MOTION PICTURE MEN IN PREPARING A REEL PERTAINING TO THE USE OF EXPLOSIVES IN LANDCLEARING.

